AMENDMENTS TO THE CLAIMS

1-165. (Cancelled)

166. (Previously presented) A membrane comprising an array of single-wall carbon nanotubes in a substantially parallel relationship, wherein the membrane is nanoporous.

167. (Previously presented) The membrane of claim 166 wherein the membrane is conductive.

168. (Currently amended) ~~The~~ A membrane ~~of claim 166 further~~ comprising: (a) an array of single-wall carbon nanotubes in a substantially parallel relationship, wherein the membrane is nanoporous; and (b) at least one photoactive molecule attached to the membrane.

169. (Currently amended) ~~The~~ A membrane ~~of claim 166~~ comprising an array of single-wall carbon nanotubes in a substantially parallel relationship, wherein the membrane is nanoporous and at least one of the single-wall carbon nanotubes have ends that are derivatized with a photoactive dye molecule.

170-171. (Cancelled)

172. (Previously presented) A membrane comprising carbon fibers that are aggregates of a plurality of single-wall carbon nanotubes, wherein the plurality of single-wall carbon nanotubes are in a generally parallel orientation.

173. (Currently amended) ~~The~~ A membrane ~~of claim 172 further~~ comprising: (a) carbon fibers that are aggregates of a plurality of single-wall carbon nanotubes, wherein the plurality of single-wall carbon nanotubes are in a generally parallel orientation; and (b) at least one dopant physically entrapped between the single-wall carbon nanotubes of the carbon fibers.

174. (Previously presented) The membrane of claim 173 wherein the dopant comprises a substance selected from the group consisting of metals, halogens, $FeCl_3$, and combinations thereof.

175-176. (Cancelled)

177. (Previously Added) A battery comprising a membrane, wherein the membrane comprises an array of single-wall carbon nanotubes in a substantially parallel relationship.

178. (Previously Added) The battery of claim 177 wherein the battery is a lithium ion battery.

179. (Previously Added) A battery comprising a membrane, wherein the membrane comprises carbon fibers that are aggregates of single-wall carbon nanotubes, and wherein the plurality of single-wall carbon nanotubes are in a generally parallel orientation.

180. (Previously Added) The battery of claim 179 wherein the battery is a lithium ion battery.

181-188. (Cancelled)